

[0091] According to an exemplary embodiment, the application may allow broadcast of certain information as part or as a connection name to the other devices. In one example, a digital music player may use parameters such as artist name, movie name, or song name to generate a dynamic identifier. A music player application can be configured to provide one or more of these parameters to a connection module in the system, and the connection module may then embed one or more these parameters into the connection name. User can always switch on or off this feature. If desired, the user can set rules as per his/her preference.

[0092] FIG. 12 illustrates a communication system that includes a plurality of electronic devices sharing content/service and a device that requests content or service. By way of example, FIG. 12 illustrates a network that includes 4 devices **1201**, **1202**, **1203** and **1204**, each of which may share content, service, or connection with a device **1205**, which is seeking content or a service. In particular, device **1201** is a Wi-Fi Direct-enabled device and is currently sharing the movie “The Matrix.” The device **1202** is a Wi-Fi-enabled device (e.g., wireless access point), which is currently not providing an Internet connection service. The device **1203** is a Wi-Fi-enabled device, which is currently offering Internet connectivity. The device **1204** is a Wi-Fi-enabled device, which is currently sharing music content. According to an aspect of an exemplary embodiment, devices **1201**, **1202**, **1203** and **1204** may transmit dynamic names (i.e., dynamic identifiers). By way of example, the Wi-Fi Direct-enabled device **1201** sharing the movie “The Matrix” may transmit a dynamic name “Tag\_WiFi-Direct The Matrix.mpg”; the Wi-Fi-enabled device **1202** currently not offering Internet connectivity may transmit a dynamic name “Tag\_WiFi-No Internet”; the Wi-Fi-enabled device **1203** currently providing an Internet connection may transmit a dynamic name “Tag\_WiFi-Internet”; and the Wi-Fi-enabled device **1204** currently sharing music may transmit a dynamic name “Tag\_WiFi-Music”.

[0093] The seeking device **1205** (i.e., client device that is requesting to establish a connection with another device) may commence a discovery process (**1206**), and receive details of the Available Devices (i.e., nearby devices that are available for communication) (**1207**). The seeking device **1205** may optionally perform a process of removing certain elements from the details of the Available Devices (**1208**). For example, the seeking device **1205** may choose to remove the portion “Tag\_” from the received information. As part of post processing, the seeking device **1205** may render the dynamic names of the available devices (**1209**), and then stop the process (**1210**). Thus, the exemplary dynamic names thus rendered on the seeking device may be “Movie The Matrix,” “Music,” “WiFi AP Internet,” and “WiFi AP No Internet.” This enables the user at the seeking device **1205** at or before the time of connection to make a more informed decision in terms of which device to connect to.

[0094] In the aforesaid scenario, if the content or service being shared by the electronic device changes, the dynamic name provided to the electronic device may also change automatically so as to keep the user updated.

[0095] FIG. 13 illustrates how a dynamic identifier may be automatically updated based on a change in the content being shared. As used herein, the term “automatically” signifies that the dynamic identifier may change from one identifier to another identifier with little or no input from the user with regard to the timing or the content of the change.

In other words, the device identifier may be spontaneously updated without the user specifically requesting the change or dictating what identifier should be used. As illustrated in FIG. 13, there is provided a television **1303** which is currently sharing a particular channel (“BBB Live”) via Bluetooth connectivity. Thus, the current dynamic name (i.e., dynamic identifier) of the television **1303** is set to “BBB Live.” If a user changes the channel from sports to news programming, the dynamic name of the television may also change accordingly (**1301**), and the new dynamic name of the television **1304** is rendered as “BBB World news.” If the channel changes from BBB World News to BBB Live, the dynamic name will once again change to BBB Live (**1302**).

[0096] In one example, the device may be a Wi-Fi device as per Institute of Electrical and Electronics Engineers (IEEE) 802.11 standards. FIG. 14 illustrates a beacon frame that may be transmitted by a Wi-Fi device according to an exemplary embodiment. A frame **1400** may be an IEEE 802.11 media access control (MAC) frame, which includes frame controls, management frames, and beacon frames, where the service set identity (SSID) field **1422** can be used for transmitting the device/connection name. In this scenario, the Wi-Fi device may periodically broadcast 801.11 MAC management frames called “beacons” irrespective of the device’s mode before a connection is established. The beacon frame may thus announce the presence of a nearby wireless station or a wireless local area network (WLAN). The beacon frame may include information about the configuration and capabilities of that network. As shown in FIG. 14, the beacon frames **1400** may include:

[0097] Frame Control **1401**, details of which is provided in the following paragraphs;

[0098] Duration indication **1402** field, which serves two purposes—communicating duration and association ID. Depending on the frame type in a transmission this field may yield two entirely different pieces of information;

[0099] Destination address (DA) field **1403**, which pertains to the MAC address of the station that is the final destination of the frame;

[0100] Source address (SA) field **1404**, which pertains to the MAC address of the station that originated the frame;

[0101] Basic service set identifier (BSSID) **1405**, which pertains to unique identifier for a particular basic service set (BSS);

[0102] Sequence control field **1406**, which allows for a receiving station to eliminate duplicate received frames;

[0103] Frame body field **1407**, details of which is provided in the following paragraphs; and

[0104] Frame check sequence (FCS) Field **1408**, which contains a cyclic redundancy check (CRC) value to verify whether or not any errors occurred in the frame.

[0105] As per IEEE 802.11, the frame control **1401** in turn includes:

[0106] Protocol version **1409** for identifying the version of the IEEE 802.11 MAC protocol;

[0107] Frame type **1410** and sub type **1411**, which identify the function of the frame and which other MAC header fields are present in the frame.

[0108] To distribution system (DS) field **1412** and From DS field **1413**;

[0109] More fragments flag subfield **1414**, which indicates that this frame **1400** is not the last fragment of a data or management frame;